DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-024343
Date Inspected: 05-Jun-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: An Qing Xiang

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the Self-Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

TA YARD, OBG 13AW (NWIT # 09367)

This QA Inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated UT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

SEG3013AA*-064, 067, 074, 081

This Quality Assurance (QA) Inspector observed the following work in progress:

TA YARD

OBG Seg 14W:

The Shielded Metal Arc Welding (SMAW) process on weld joint no: Seg3020AJ-152 [I-rib to I-rib stiffener complete joint penetration (CJP) splice weld on Bottom Panel (BP) at panel point (PP) 126]. The welder is

identified as 066261 and was observed welding in 3G position. ZPMC Quality Control (QC) was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2213-B-U2-FCM-1.

The Flux Cored Arc Welding (FCAW) process on weld joint no: Seg3020V-034 [Diaphragm Plate to Top Anchorage Plate (AP) 3016A, CJP weld at PP125]. The welder is identified as 066421 and was observed welding in 2G position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The SMAW process on weld joint no: Seg3020H-027 [Floor Beam (FB) 3330A to Side Panel (SP) 3133A, fillet weld at PP127.5]. The welder is identified as 067036 and was observed welding in 2F position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2112-FCM-1.

The SMAW process on weld joint no: Seg3020BB-077 [Anchor Plate (AP) to I-rib stiffener (RS3513P) on Bottom Panel, CJP weld]. The welder is identified as 066361 and was observed welding in 2G position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2213-B-U2-FCM-1.

The SMAW process on weld joint no: Seg3020D-228 [I-rib stiffener to Longitudinal Diaphragm (LD) 3050A, CJP weld at PP128.3]. The welder is identified as 066239 and was observed welding in 4G position. ZPMC QC was identified as Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

During Quality Assurance Visual Inspection (VT) and Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Segment 13AW, between panel point (PP)119 and PP119+1500 (Cross Beam Side), this Quality Assurance Inspector (QA) discovered the following 2 issues:

Issue # 1
- One Longitudinal crack measuring approximately 130 mm in length.
- The “Y” location is approximately 0 mm from cope hole.
- The weld is identified as: SEG3013AA*-071.
- This weld is a Complete joint penetration (CJP) with 6mm reinforcement fillet weld joining plate stiffener RS3382E (A709M-HPS485W) to plate stiffener X4469E (A709M-345).

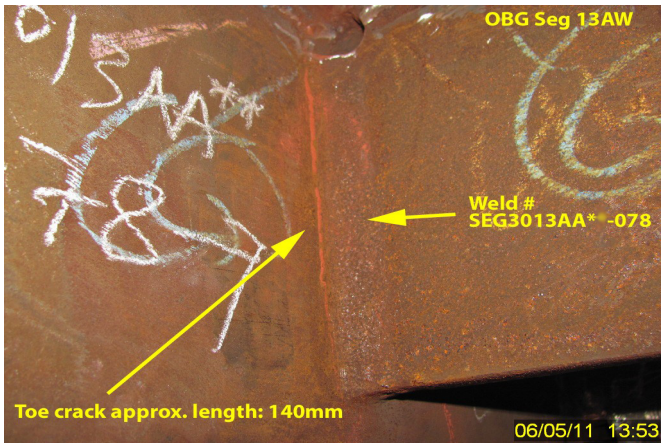
Issue # 2
- One Longitudinal crack measuring approximately 140 mm in length.
- The “Y” location is approximately 0 mm from cope hole.
- The weld is identified as: SEG3013AA*-078.
- This weld is a Complete joint penetration (CJP) with 6mm reinforcement fillet weld joining plate stiffener RS3382E (A709M-HPS485W) to plate stiffener X4469E (A709M-345).
- The indications were discovered visually and confirmed by Magnetic particle Testing (MT) by Caltrans QA Inspector.

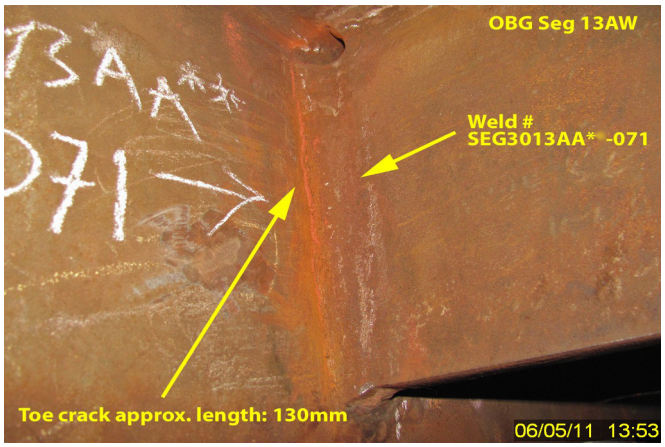
- These cracks are clearly marked on the material near the weld.

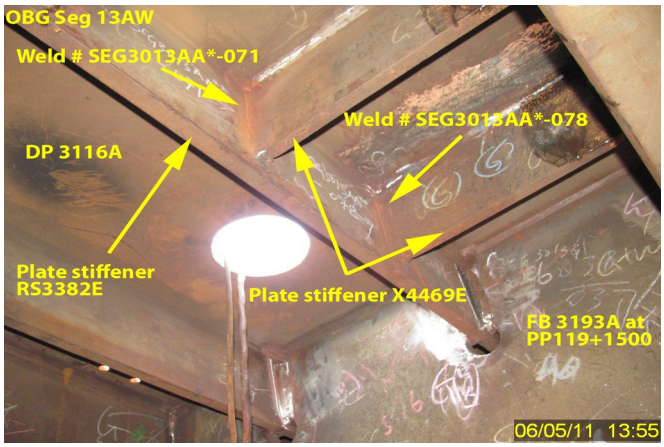
- Segment 13AW is currently located in the OBG Trial assembly area.

The Notice of Witness Inspection Number (NWIT) is 09367. The cracks are located within an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, The contractors personnel are required to perform 100% VT and UT inspection of these welds. These cracks were found visually and confirmed by Magnetic Particle Testing (MT). This QA Inspector generated Incident Report (IR) for this issue on this date. See attached photograph for further details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.







Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang : 15000422372, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

Inspected By:	Gaikwad,Umesh	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer